

PATENT COOPERATION TREATY

PCT

INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)

Applicant's or agent's file reference X-16438	FOR FURTHER ACTION <small>see Form PCT/ISA/220 as well as, where applicable, item 5 below.</small>	
International application No. PCT/US2004/016623	International filing date (day/month/year) 17/06/2004	(Earliest) Priority Date (day/month/year) 29/03/2004
Applicant ELI LILLY AND COMPANY		

This International Search Report has been prepared by this International Searching Authority and is transmitted to the applicant according to Article 18. A copy is being transmitted to the International Bureau.

This International Search Report consists of a total of 06 sheets.

☒ It is also accompanied by a copy of each prior art document cited in this report.

1. Basis of the report

a. With regard to the **language**, the international search was carried out on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.

☐ The international search was carried out on the basis of a translation of the international application furnished to this Authority (Rule 23.1(b)).

b. ☒ With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, see Box No. I.

2. ☐ **Certain claims were found unsearchable** (See Box II).

3. ☐ **Unity of invention is lacking** (see Box III).

4. With regard to the title,

☒ the text is approved as submitted by the applicant.

☐ the text has been established by this Authority to read as follows:

5. With regard to the abstract,

☒ the text is approved as submitted by the applicant.

☐ the text has been established, according to Rule 38.2(b), by this Authority as it appears in Box No. IV. The applicant may, within one month from the date of mailing of this international search report, submit comments to this Authority.

6. With regards to the drawings,

a. the figure of the **drawings** to be published with the abstract is Figure No. _____

☐ as suggested by the applicant.

☐ as selected by this Authority, because the applicant failed to suggest a figure.

☐ as selected by this Authority, because this figure better characterizes the invention.

b. ☒ none of the figures is to be published with the abstract.

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Box No. I Nucleotide and/or amino acid sequence(s) (Continuation of item 1.b of the first sheet)

1. With regard to any nucleotide and/or amino acid sequence disclosed in the international application and necessary to the claimed invention, the international search was carried out on the basis of:
- a. type of material
- ☒ a sequence listing
- ☐ table(s) related to the sequence listing
- b. format of material
- ☒ in written format
- ☒ in computer readable form
- c. time of filing/furnishing
- ☒ contained in the international application as filed
- ☒ filed together with the international application in computer readable form
- ☐ furnished subsequently to this Authority for the purpose of search
2. ☐ In addition, in the case that more than one version or copy of a sequence listing and/or table relating thereto has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that in the application as filed or does not go beyond the application as filed, as appropriate, were furnished
3. Additional comments

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International Application No

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A. CLASSIFICATION OF SUBJECT MATTER

IPC 7 A61K38/12 A61P3/04

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 A61K A61P

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, PAJ, EMBASE, BIOSIS, WPI Data, PASCAL

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No
Y	<p>✓HASKELL-LUEVANO C ET AL: "Characterization of melanocortin NDP-MSH agonist peptide fragments at the mouse central and peripheral melanocortin receptors" JOURNAL OF MEDICINAL CHEMISTRY, AMERICAN CHEMICAL SOCIETY, WASHINGTON, US, vol. 44, no. 13, 2001, pages 2247-2252, XP002970859 ISSN: 0022-2623 the whole document</p> <p style="text-align: center;">----- -/--</p>	1-16

☒ Further documents are listed in the continuation of box C

☒ Patent family members are listed in annex.

* Special categories of cited documents

"A" document defining the general state of the art which is not considered to be of particular relevance

"E" earlier document but published on or after the international filing date

"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)

"O" document referring to an oral disclosure, use, exhibition or other means

"P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X" document of particular relevance, the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y" document of particular relevance, the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art

"&" document member of the same patent family

Date of the actual completion of the international search

26 October 2004

Date of mailing of the international search report

10/11/2004

Name and mailing address of the ISA

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International Application No

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C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No
Y	PROIETTO J ET AL: "NOVEL ANTI-OBESITY DRUGS" EXPERT OPINION ON INVESTIGATIONAL DRUGS, ASHLEY PUBLICATIONS LTD., LONDON, GB, vol. 9, no. 6, June 2000 (2000-06), pages 1317-1326, XP001004696 ISSN: 1354-3784	1-26
X	page 1321, column 2, paragraph 3.2 - page 1322, column 1, paragraph 3.2.3	1-4, 10-12
Y	✓ WO 00/33658 A (HOCHGESCHWENDER UTE ; BRENNAN MILES B (US); ELEANOR ROOSEVELT INST (US) 15 June 2000 (2000-06-15)	1-26
X	claims 1-124	1-4, 10-12
Y	✓ WO 03/006604 A (MERCK & CO INC ; BEDNAREK MARIA A (US)) 23 January 2003 (2003-01-23)	1-26
X	the whole document	1-4, 10-12
Y	✓ HOLDER JERRY RYAN ET AL: "Structure-activity relationships of the melanocortin tetrapeptide Ac-His-DPhe-Arg-Trp-NH ₂ at the mouse melanocortin receptors. 1. Modifications at the His position" JOURNAL OF MEDICINAL CHEMISTRY, vol. 45, no. 13, 20 June 2002 (2002-06-20), pages 2801-2810, XP001183565 ISSN: 0022-2623 the whole document	1-26
Y	✓ CHEUNG ADRIAN WAI-HING ET AL: "Structure-activity relationship of linear peptide Bu-His-DPhe-Arg-Trp-Gly-NH ₂ at the human melanocortin-1 and -4 receptors: Histidine substitution." BIOORGANIC AND MEDICINAL CHEMISTRY LETTERS, vol. 13, no. 1, 6 January 2003 (2003-01-06), pages 133-137, XP001183563 ISSN: 0960-894X	1-26
X	the whole document	1-4, 10-12
Y	✓ US 2002/143141 A1 (YAGALOFF KEITH ALAN ET AL) 3 October 2002 (2002-10-03)	1-26
X	the whole document	1-4, 10-12
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C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No
Y	WO 00/58361 A (PROCTER & GAMBLE)	1-26
X	5 October 2000 (2000-10-05) claims 1-15	1-5, 10-13
Y	WO 99/54358 A (QUADRANT HOLDINGS CAMBRIDGE GISPEN WILLEM HENDRIK (NL); ADAM ROGER A) 28 October 1999 (1999-10-28)	1-26
X	the whole document	1-5, 10-13

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Information on patent family members

International Application No

PCT/US2004/016623

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
WO 0033658	A	15-06-2000	US 6603058 B1 AU 3117600 A CA 2353776 A1 EP 1137340 A1 JP 2003520015 T WO 0033658 A1 US 2003144174 A1 US 6716810 B1	05-08-2003 26-06-2000 15-06-2000 04-10-2001 02-07-2003 15-06-2000 31-07-2003 06-04-2004
WO 03006604	A	23-01-2003	CA 2453027 A1 EP 1409521 A2 WO 03006604 A2 US 2004171793 A1	23-01-2003 21-04-2004 23-01-2003 02-09-2004
US 2002143141	A1	03-10-2002	AU 8402601 A BR 0113637 A CA 2420058 A1 CN 1451017 T CZ 20030584 A3 WO 0218437 A2 EP 1315750 A2 HU 0303078 A2 JP 2004507558 T NO 20030916 A NZ 523989 A	13-03-2002 25-02-2004 07-03-2002 22-10-2003 13-08-2003 07-03-2002 04-06-2003 29-12-2003 11-03-2004 27-02-2003 27-08-2004
WO 0058361	A	05-10-2000	AU 763510 B2 AU 4017900 A BR 0009497 A CA 2368431 A1 CN 1345335 T CZ 20013407 A3 EP 1165613 A1 HU 0202203 A2 ID 30262 A JP 2002542159 T MA 25403 A1 NO 20014568 A NZ 514141 A PL 350095 A1 RU 2213098 C2 SK 13082001 A3 TR 200102765 T2 WO 0058361 A1 US 6613874 B1 US 2004023859 A1 ZA 200107411 A	24-07-2003 16-10-2000 15-01-2002 05-10-2000 17-04-2002 13-02-2002 02-01-2002 28-10-2002 15-11-2001 10-12-2002 01-04-2002 29-11-2001 30-01-2004 04-11-2002 27-09-2003 05-03-2002 21-05-2002 05-10-2000 02-09-2003 05-02-2004 12-03-2002
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